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RESEARCH IN IMPROVED ASSESSMENT OF
SOFTWARE RELIABILITY (U)

6 AUTHOR(S)

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13. ABSTRACT (Maximum 200 words)

The objective of this research was to develop novel and realistic statistical models and experimental schemes for software development and testing. The proposed research was directed towards the development of improved techniques for assessing the reliability and quality of computer software. There were 12 technical reports and two publications in refereed journals written under this grant.

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Under the aegis of the above grant, the following technical reports listed here, have been written as of November 30, 1992. Of these, two resulted in a publication, and citations for these are also given.

Publications in Refereed Journals

- [1] Singpurwalla, N. D. (1992). Survival under multiple time scales in dynamic environments. In *Survival Analysis: State of Arts*, eds. J. P. Klein and P. K. Goel, 345-354. Holland: Kluwer Academic.
- [2] Singpurwalla, N. D. and R. L. Smith (1992). A conversation with Boris Gnedenko. *Statistical Science* 7 (2): 273-283.

Technical Reports Issued

- [1] Abel, P. and N. D. Singpurwalla (1992). To survive or to fail? That is a question. Technical Report GWU/IRRA/92/12. Washington, DC: George Washington University, Institute for Reliability and Risk Analysis.
- [2] Aboura, K. and S. P. Wilson (1992). A study of dependence for the Association of American Railroads. Technical Report GWU/IRRA/92/17. Washington, DC: GWU, IRRA.
- [3] Campodónico, S. and N. D. Singpurwalla (1992). Expert opinion in reliability. Technical Report GWU/IRRA/92/5. Washington, DC: GWU, IRRA.
- [4] Campodónico, S. and N. D. Singpurwalla (1992). A Bayesian analysis of the logarithmic - Poisson execution time model based on expert opinion and failure data. Technical Report GWU/IRRA/92/22. Washington, DC: GWU, IRRA.
- [5] Singpurwalla, N. D. (1991). Survival under multiple time scales in dynamic environments. Technical Report GWU/IRRA/91/10. Washington, DC: GWU, IRRA.
- [6] Singpurwalla, N. D. (1991). An eavesdrop on a chance encounter of like minded ghosts. Technical Report GWU/IRRA/91/14. Washington, DC: GWU, IRRA.
- [7] Singpurwalla, N. S. (1992). Survival in dynamic environments. Technical Report GWU/IRRA/92/1. Washington, DC: GWU, IRRA.
- [8] Singpurwalla, N. D. (1992). A review of Crowder et als. "Statistical Analysis of Reliability Data." Technical Report GWU/IRRA/92/14. Washington, DC: GWU, IRRA.
- [9] Singpurwalla, N. D. (1992). The failure rate of software: does it exist? Technical Report GWU/IRRA/92/15. Washington, DC: GWU, IRRA.

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- [10] Singpurwalla, N. D. (1992). Entropy and information in reliability. Technical Report GWU/IRRA/92/16. Washington, DC: GWU, IRRA.
- [11] Singpurwalla, N. D. and R. L. Smith (1991). Boris Vladimirovich Gnedenko. Technical Report GWU/IRRA/91/11. Washington, DC: GWU, IRRA.
- [12] Singpurwalla, N. D. and S. P. Wilson (1991). Models for assessing the reliability of computer software. Technical Report GWU/IRRA/91/13. Washington, DC: GWU, IRRA.

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